

REMARKS

It has now been determined that an erroneous statement may have been made in the response of May 27, 2003. This statement is the third sentence of the third paragraph on page 5: "No mention is made of any two layers having dn/dT values of different signs," made with respect to *Shirasaki*. It now has been determined by the inventors that, based on values at 436 nm, from 0-20°C, in air, the two materials used by *Shirasaki* do appear to have the dn/dT of different signs. S-FPL53 in the O'Hara catalog has dn/dT of -6.5ppm/K; LaCl₄ in the Hoya catalog is described as equivalent to assignee's LaKN (SCHOTT GLAS) which has a dn/dT of +4.4ppm/K. To the extent this could impact claim 15, this issue has now been rendered moot by the new version of claim 15. The formula in new claim 15 is supported by a simple generalization to i layers of formula 6 on page 10.

It is again respectfully submitted that there is no motivation of record to support the examiner's contention that anything in the cited prior art would motivate a skilled worker to employ the surface figure recited in the claims. Without a reason in the prior art to provide the recited component with the recite surface figure of <200nm, there can be no such motivation. Without the latter, there is no maintainable rejection under 35 U.S.C. §103.

Irrespective of whether the optical elements of *Hares* are athermal, the reference gives no reason to provide a surface figure of <200nm. It is irrelevant whether one could achieve such a surface figure; the case law requires that there be a reason why one should achieve such figure. This invention provides such a reason, i.e., the invention of utilizing, for example, silver chloride or cesium bromide in, e.g., demultiplexer applications at wavelengths where such a surface figure is important. *Hares* has nothing to do with such use. Furthermore, the uses of the photochromic glasses of *Hares*, e.g., ophthalmic eyewear, do not motivate a skilled worker to use a surface figure as recited in the claims of this application. A surface figure even an order of magnitude higher in roughness than that recited in the claims would still be acceptable in ophthalmic applications. In no way does this provide the requisite motivation. (In this regard, note also claims 35 and 36. *Hares'* crystals are instead embedded in a glass substrate.)

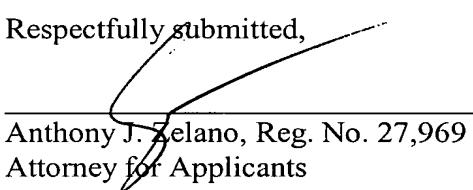
The same is true for *Downing*. The examiner argues that "actual threshold and a long lifetime of crystalline structure" can greatly depend on surface preparation. Thus, it is alleged

that one would provide the surface figure recited in the claims in order to provide an efficient long life laser. However, there is no support at all for the contention that such considerations, even if true, would lead a skilled worker to provide a surface figure of less than 200nm as opposed to a higher surface figure outside the claims. Again, just because one might use a high surface figure does not mean one should do so without a reason. The normal presumption is that skilled workers will employ requirements for which there is a worthwhile benefit. One cannot simply say that if a certain high surface figure is acceptable, it is always obvious to employ an even better surface figure just because it is possible to do so. Again, there needs to be a reason why one should do so.

In view of the foregoing, it is respectfully submitted that all rejections should be withdrawn.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,


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Attorney Docket No.: SGT-34P1

Date: December 9, 2003

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